

Table 2-H-7
Sacramento to Bakersfield – High-Speed Train Alignment Evaluation Matrix
Stockton to Modesto Alignment

Alignment = Alignment Carried Forward

Alignment = Alignment Eliminated

1 = Primary or Secondary Reason for Elimination

Evaluation Criteria	Express Loop/BNSF (Downtown Stockton to Modesto Briggsmore)	Express Loop/UPRR (Downtown Stockton to Downtown Modesto)	W99 (Downtown Stockton to Modesto West)
<i>Maximize Ridership/Revenue Potential.</i>			
Travel Time	VHS 11.6 minutes	VHS 11.4 minutes	VHS 12.6 minutes
	3	3	2
Length	31.424 miles 50.571 km	30.653 49.331 km	34.985 miles 56.303 km
	3	3	2
Population/Employment Catchment	Not Applicable		
<i>Maximize Connectivity and Accessibility.</i>			
Intermodal Connections	*See Modesto Briggsmore Station Option	*See Modesto Downtown Station Option	*See Modesto West Station Option
	3	3	1
<i>Minimize Operating and Capital Costs.</i>			
Length	Route meanders	Route meanders	Route meanders
	4	4	5
Operational Issues	Diverges from UP and ACE alignment, travels on new alignment, merges with BNSF alignment.	Diverges from UP and ACE alignment, travels on new alignment, merges with UP alignment.	Diverges from UP and ACE alignment, travels on new alignment.
	4	3	3

Evaluation Criteria	Express Loop/BNSF (Downtown Stockton to Modesto Briggsmore)	Express Loop/UPRR (Downtown Stockton to Downtown Modesto)	W99 (Downtown Stockton to Modesto West)
Construction Issues	Downtown location and grade separations, esp. rail crossings south of the Downtown Stockton station. Water table in Delta floodplain. New urban ROW.	Downtown location and grade separations, especially rail crossings south of the Downtown Stockton station. Water table issues in floodplain of Delta. New urban right-of-way first 10 miles.	Downtown location and grade separations, especially rail crossings south of Downtown Stockton station. Water table issues in floodplain of Delta. New urban right-of-way first 10 miles.
	2	2	2
Capital Cost	Moderate to high cost because of Stockton Downtown costs.	Moderate cost. Downtown costs in Stockton	Moderate cost. Downtown costs in Stockton
	2	2	2
Right-of-Way Issues/Cost	New urban alignment New alignment BNSF upgrade	New urban alignment New alignment UP upgrade	New urban alignment New alignment
	2	2	2
<i>Maximize Compatibility with Existing and Planned Development.</i>			
Land Use Compatibility and Conflicts			
Percent of Conflicting Existing Land Uses within adjacent buffers (Residences, Institutions, Recreation, Parks, and Open Space)	9.25	13.31	8.33
	2	1	3
Visual Quality Impacts			
Scenic Corridor and River Crossings	3.00	3.00	4.00
	3	3	2

Evaluation Criteria	Express Loop/BNSF (Downtown Stockton to Modesto Briggsmore)	Express Loop/UPRR (Downtown Stockton to Downtown Modesto)	W99 (Downtown Stockton to Modesto West)
<i>Minimize Impacts on Natural Resources.</i>			
Water Resources Impacts	*Alignment adjacent to existing rail right-of-way		*Impacts on "new corridor"
Number of Natural Stream/Lake Crossings (linear ft)	10.00 (500)	5.00 (250)	11.00 (550)
Number of Wetland Crossings	3.00	2.00	3.00
Total Acreage of Wetlands Within ROW	3.61	0.37	1.81
	1	3	1
Floodplain Impacts	*Alignment adjacent to existing rail right-of-way		*Impacts on "new corridor"
Number of FEMA Floodplain Crossings	9.00	3.00	11.00
Associated Length (meters) of Floodplain Crossings	6741.69	1002.95	7314.69
Total Acreage of FEMA Floodplain Crossings	43.97	7.04	48.45
	1	5	1
Threatened & Endangered Species Impacts			
Count of Species w/in ROW	6.00	5.00	5.00
Count of Species along ROW	6.00	7.00	0.00
Sensitive Habitat Acreage w/in ROW	0.00	2.00	0.00
Net Sensitive Habitat Acreage along ROW	0.00	0.00	
	2	1	2
<i>Minimize Impacts on Social and Economic Resources.</i>			
Environmental Justice Impacts (Demographics)			
Minority Within 1,400' Buffer – 1990 Population	20449.00	19138.00	17917.00
Low Income Within 1,400' Buffer – 1990 Households	134.00	196.00	134.00
	1	1	1

Evaluation Criteria	Express Loop/BNSF (Downtown Stockton to Modesto Briggsmore)	Express Loop/UPRR (Downtown Stockton to Downtown Modesto)	W99 (Downtown Stockton to Modesto West)
Farmland Impacts	*Alignment adjacent to existing rail right-of-way	*Alignment adjacent to existing rail right-of-way	*Impacts on "new corridor"
Total Acreage of Important Farmlands Within ROW (Prime, Unique, and Statewide Importance)	219.51	204.29	267.16
	2	3	1
<i>Minimize Impacts on Cultural Resources.</i>			
Cultural Resources Impacts			
Number of National Register Resources Within ROW	0.00	0.00	0.00
Number of National Register Resources along ROW	0.00	0.00	0.00
	5	5	5
Parks & Recreation/Wildlife Refuge Impacts			
Total Acreage Parks/Recreation Areas in ROW	0.00	0.00	0.00
Total Acreage of Parks/Recreation Areas along ROW	2.12	0.21	1.82
Incidences of Parks/Recreation Areas in ROW	0.00	0.00	0.00
Incidences of Parks/Recreation Areas along ROW	3.00	1.00	2.00
	1	4	2
<i>Maximize Avoidance of Areas with Geologic and Soils Constraints.</i>			
Soils/Slope Constraints			
Not a Distinguishing Factor			
Seismic Constraints			
Not a Distinguishing Factor			
<i>Maximize Avoidance of Areas with Potential Hazardous Materials.</i>			
Hazardous Materials/Waste Constraints			
Not a Distinguishing Factor			

1 2 3 4 5
Least Favorable Most Favorable